In the Claims

The listing of claims will replace all prior versions and listings of claims in the application.

Listings of claims

1. (original) A compound of formula (1):

$$R^4$$
 Z
 O
 Y
 (2)
 (1)
 A
 $(R^1)_n$
 (1)

wherein:

Z is CH or nitrogen;

 R^4 and R^5 together are either $-S-C(R^6)=C(R^7)$ - or $-C(R^7)=C(R^6)-S-$:

R⁶ and R⁷ are independently selected from hydrogen, halo, nitro, cyano, hydroxy, fluoromethyl, difluoromethyl, trifluoromethyl, trifluoromethoxy, carboxy, carbamoyl, (1-4C)alkyl, (2-4C)alkenyl, (2-4C)alkynyl, (1-4C)alkoxy and (1-4C)alkanoyl; A is phenylene or heteroarylene;

n is 0, 1 or 2;

R¹ is independently selected from halo, nitro, cyano, hydroxy, carboxy, carbamoyl, N-(1-4C)alkylcarbamoyl, N,N-((1-4C)alkyl)₂carbamoyl, sulphamoyl, N-(1-4C)alkylsulphamoyl, $N,N-((1-4C)alkyl)_2$ sulphamoyl, $-S(O)_b(1-4C)alkyl$ (wherein b is 0,1,or 2), $-OS(O)_2(1-4C)alkyl$, (1-4C)alkyl, (2-4C)alkenyl, (2-4C)alkynyl, (1-4C)alkoxy, (1-4C)alkanoyl, (1-4C)alkanoyloxy, hydroxy(1-4C)alkyl, fluoromethyl, difluoromethyl, trifluoromethyl, trifluoromethoxy and -NHSO₂(1-4C)alkyl;

or, when n is 2, the two R¹ groups, together with the carbon atoms of A to which they are attached, may form a 4 to 7 membered saturated ring, optionally containing 1 or 2 heteroatoms independently selected from O, S and N, and optionally being substituted by one or two methyl groups;

r is 1 or 2; and when r is 1 the group

is a substituent on carbon (2) and when r is 2 (hereby forming a six membered ring) the same group is a substituent on carbon (2) or on carbon (3);

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Y is selected from -C(O)R<sup>2</sup>, -C(O)OR<sup>2</sup>, -C(O)NR<sup>2</sup>R<sup>3</sup>, -(1-4C)alkyl [optionally substituted by 1
or 2 substituents independently selected from hydroxy, -C=NR2, (1-4C)alkoxy, aryloxy,
heterocyclyloxy, -S(O)_bR^2 (wherein b is 0, 1 or 2), -O-S(O)_bR^2 (wherein b is 0, 1 or 2),
-NR^2R^3, -N(OH)R^2, -NR^2C(=O)R^2, -NHOHC(=O)R^2, -SO_2NR^2R^3, -N(R^2)SO_2R^2, arvl and
heterocyclyl], -C(O)NOH, -C(O)NSH, -C(N)OH, -C(N)SH, -SO_2H, -SO_3H, -SO_2N(OH)R^2,
-(2-4C)alkenyl, -SO<sub>2</sub>NR<sup>2</sup>R<sup>3</sup>, -(1-4C)alkylC(O)R<sup>2</sup>, -(1-4C)alkylC(O)OR<sup>2</sup>, -(1-4C)alkylSC(O)R<sup>2</sup>,
-(1-4C)alkylOC(O)R<sup>2</sup>, -(1-4C)alkylC(O)NR<sup>2</sup>R<sup>3</sup>, -(1-4C)alkylOC(O)OR<sup>2</sup>,
-(1-4C)alkyIN(R^2)C(O)OR^2, -(1-4C)alkyIN(R^2)C(O)NR^2R^3, -(1-4C)alkyIOC(O)NR^2R^3,
(3-6C)cycloalkyl (optionally substituted by 1 or 2 R8), aryl, heterocyclyl (wherein the
heterocyclic ring is linked by a ring carbon atom), -(1-4C)alkylSO<sub>2</sub>(2-4C)alkenyl and -S(O)<sub>c</sub>R<sup>2</sup>
(wherein c is 0, 1 or 2);
R<sup>2</sup> and R<sup>3</sup> are independently selected from hydrogen, -O(1-4C)alkyl, -S(1-4C)alkyl,
-N(1-4C)alkyl, heterocyclyl, aryl, and (1-4C)alkyl [optionally substituted by 1 or 2 R<sup>8</sup> groups];
or
wherein NR<sup>2</sup>R<sup>3</sup> may form a 4 to 7 membered saturated, partially saturated or unsaturated
ring, optionally containing 1, 2 or 3 additional heteroatoms independently selected from N, O
and S (provided there are no O-O, O-S or S-S bonds), wherein any -CH₂- may optionally be
replaced by -C(=O)-, and any N or S atom may optionally be oxidised to form an N-oxide or
SO or SO<sub>2</sub> group respectively, and wherein the ring is optionally substituted by 1 or 2
substituents independently selected from halo, cyano, (1-4C)alkyl, hydroxy, (1-4C)alkoxy and
(1-4C)alkylS(O)<sub>b</sub>- (wherein b is 0, 1 or 2);
R<sup>8</sup> is independently selected from hydrogen, hydroxy, (1-4C)alkyl, (2-4C)alkenyl,
(1-4C)alkoxy, cyano((1-4C))alkyl, amino((1-4C))alkyl [optionally substituted on nitrogen by 1
or 2 groups selected from (1-4C)alkyl, hydroxy, hydroxy((1-4C))alkyl, dihydroxy((1-4C))alkyl,
-CO₂(1-4C)alkyl, aryl and aryl((1-4C))alkyl], halo((1-4C))alkyl, dihalo((1-4C))alkyl,
trihalo((1-4C))alkyl, hydroxy((1-4C))alkyl, dihydroxy((1-4C))alkyl, (1-4C)alkoxy(1-4C)alkoxy,
(1-4C)alkoxy(1-4C)alkyl, hydroxy(1-4C)alkoxy, 5- and 6-membered cyclic acetals and mono-
and di-methyl derivatives thereof, aryl, heterocyclyl, (heterocyclyl)(1-4C)alkyl,
(3-7C)cycloalkyl (optionally substituted with 1 or 2 hydroxy groups, (1-4C)alkyl or
-CO<sub>2</sub>(1-4C)alkyl), (1-4C)alkanoyl, (1-4C)alkylS(O)<sub>b</sub>- (wherein b is 0, 1 or 2),
(3-6C)cycloalkylS(O)<sub>b</sub>- (wherein b is 0, 1 or 2), arylS(O)<sub>b</sub>- (wherein b is 0, 1 or 2),
heterocyclylS(O)<sub>b</sub>- (wherein b is 0, 1 or 2), benzylS(O)<sub>b</sub>- (wherein b is 0, 1 or 2),
(1-4C)alkylS(O)c(1-4C)alkyl- (wherein c is 0, 1 or 2), -N(OH)CHO, -C(=N-OH)NH<sub>2</sub>,
-C(=N-OH)NH(1-4C)alkyl, -C(=N-OH)N((1-4C)alkyl)<sub>2</sub>, -C(=N-OH)NH(3-6C)cycloalkyl,
-C(=N-OH)N((3-6C)cycloalkyl)<sub>2</sub>, -COCOOR<sup>9</sup>, -C(O)N(R<sup>9</sup>)(R<sup>10</sup>), -NHC(O)R<sup>9</sup>,
-C(O)NHSO<sub>2</sub>((1-4C)alkyl), -NHSO<sub>2</sub>R<sup>9</sup>, (R<sup>9</sup>)(R<sup>10</sup>)NSO<sub>2</sub>-, -COCH<sub>2</sub>OR<sup>11</sup>, -COCH<sub>2</sub>OH,
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 $(R^9)(R^{10})N$ -, -COOR 9 , -CH $_2$ OR 9 , -CH $_2$ COOR 9 , -CH $_2$ OCOR 9 , -CH $_2$ CH(CO $_2$ R 9)OH, -CH $_2$ C(O)NR 9 R 10 , -(CH $_2$) $_w$ CH(NR 9 R 10)CO $_2$ R 9 9 (wherein w is 1, 2 or 3), and -(CH $_2$) $_w$ CH(NR 9 R 10)CO(NR 9 R 10) (wherein w is 1, 2 or 3);

R⁹, R⁹, R¹⁰ and R¹⁰ are independently selected from hydrogen, hydroxy, (1-4C)alkyl (optionally substituted by 1 or 2 R¹¹), (2-4C)alkenyl, (3-7C)cycloalkyl (optionally substituted by 1 or 2 hydroxy groups), cyano((1-4C))alkyl, trihaloalkyl, aryl, heterocyclyl, heterocyclyl((1-4C)alkyl), -CO₂(1-4C)alkyl; or

R⁹ and R¹⁰ together with the nitrogen to which they are attached, and/or R^{9'} and R^{10'} together with the nitrogen to which they are attached, form a 4- to 6-membered ring where the ring is optionally substituted on carbon by 1 or 2 substituents independently selected from oxo, hydroxy, carboxy, halo, nitro, cyano, carbonyl, (1-4C)alkoxy and heterocyclyl; or the ring may be optionally substituted on two adjacent carbons by –O-CH₂-O- to form a cyclic acetal wherein one or both of the hydrogens of the -O-CH₂-O- group may be replaced by a methyl; R¹¹ is independently selected from (1-4C)alkyl and hydroxy(1-4C)alkyl; or a pharmaceutically acceptable salt or pro-drug thereof.

- 2. (original) A compound of the formula (1), or a pharmaceutically acceptable salt or pro-drug thereof, as claimed in claim 1, wherein A is phenylene.
- 3. (currently amended) A compound of the formula (1), or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof, as claimed in claim 1-or-claim-2, wherein n is 0.
- 4 (currently amended) A compound of the formula (1), or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof, as claimed in <u>claim 1</u> any one of the preceding claims wherein r is 1.
- 5. (currently amended) A compound of the formula (1), or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof, as claimed in <u>claim 1</u> any one of the preceding claims wherein R⁶ and R⁷ are independently hydrogen or halo.
- 6. (currently amended) A compound of the formula (1), or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof, as claimed in claim 1 any one of the preceding claims wherein Y is selected from $-C(O)OR^2$, $-C(O)NR^2R^3$, -(1-4C)alkyl [optionally substituted by a substituent selected from hydroxy, (1-4C)alkoxy, $-S(O)_bR^2$ (wherein b is 0, 1 or 2), $-O-S(O)_bR^2$ (wherein b is 0, 1 or 2), $-NR^2R^3$, $-NR^2C(=O)R^2$ and $-SO_2NR^2R^3$], -(1-4C)alkyl $C(O)R^2$, -(1-4C)alkyl $C(O)R^2$

-(1-4C)alkylOC(O)OR², -(1-4C)alkylN(R²)C(O)OR², -(1-4C)alkylN(R²)C(O)NR²R³, -(1-4C)alkylSC(O)R², -(1-4C)alkylOC(O)NR²R³, -(1-4C)alkylSO₂(2-4C)alkenyl and -SO_cR² (wherein c is 0, 1 or 2).

- 7. (currently amended) A compound of the formula (1), or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof, as claimed in claim 1 any one of the preceding claims wherein R² and R³ are independently selected from hydrogen, heterocyclyl, -O(1-4C)alkyl, -N(1-4C)alkyl, (1-4C)alkyl [optionally substituted by 1 or 2 R³ groups]; or an NR²R³ group forms a morpholine, thiomorpholine (and oxidised versions thereof), pyrrolidine, or piperidine ring and wherein the ring is optionally substituted by 1 or 2 substituents independently selected from chloro, fluoro, hydroxy and methoxy.
- 8. (currently amended) A compound of the formula (1), or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof, as claimed in <u>claim 1</u> any one of the preceding claims wherein R⁸ is independently selected from hydrogen, hydroxy, -C(O)N(R⁹)(R¹⁰), -NHC(O)R⁹, -COOR⁹, -CH₂OCOR⁹, -CH₂OCOR⁹, aryl, heterocyclyl, and 5- and 6-membered cyclic acetals and mono- and di-methyl derivatives thereof.
- 9. (currently amended) A compound of the formula (1), or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof, as claimed in <u>claim 1</u> any one of the preceding claims wherein R⁹ and R¹⁰ are independently selected from hydrogen, hydroxy and (1-4C)alkyl) or R⁹ and R¹⁰ together with the nitrogen to which they are attached form a morpholine, thiomorpholine (and oxidised versions thereof), pyrrolidine, or piperidine ring.
- 10. (original) A pharmaceutical composition which comprises a compound of the formula (1), or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof, as claimed in claim 1 in association with a pharmaceutically-acceptable diluent or carrier.
- 11-15. (cancelled)
- 16. (original) A process for the preparation of a compound of formula (1) as claimed in claim 1, which process comprises: reacting an acid of the formula (2):

$$R^4$$
 Z
 OH
 R^5
 H
 O

(2)

or an activated derivative thereof; with an amine of formula (3):

$$NH_2 \xrightarrow{()_r} A \xrightarrow{(R^1)_n}$$

and thereafter if necessary:

- i) converting a compound of the formula (1) into another compound of the formula (1);
- ii) removing any protecting groups;
- iii) forming a pharmaceutically acceptable salt or in vivo hydrolysable ester.

17. (new) A compound of the formula (1), or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof, as claimed in claim 1 wherein R^4 and R^5 are together -S-C(R^6)=C(R^7)-.

18. (new) A compound of the formula (1), or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof, as claimed in claim 1 wherein both R⁶ and R⁷ are chloro.

19 (new) A compound of the formula (I) or a pharmaceutically acceptable salt or pro-drug thereof, wherein

A is phenylene;

n is 0;

Z is CH;

 R^4 and R^5 are together $-S-C(R^6)=C(R^7)-$ or $-C(R^7)=C(R^6)-S-$;

R⁶ and R⁷ are independently selected from hydrogen and chloro;

Y is selected from $-C(O)OR^2$, $-C(O)NR^2R^3$, -(1-4C)alkyl [optionally substituted by a substituent selected from $-S(O)_bR^2$ (wherein b is 0, 1 or 2), $-O-S(O)_bR^2$ (wherein b is 0, 1 or 2), $-NR^2R^3$, $-NR^2C(=O)R^2$ and $-SO_2NR^2R^3$], -(1-4C)alkyl $C(O)OR^2$, -(1-4C)alkyl $C(O)NR^2R^3$, -(1-4C)alkyl $SO_2(2-4C)$ alkenyl and $-SO_cR^2$ (wherein c is 0, 1 or 2);

R² and R³ are independently selected from hydrogen, heterocyclyl, and (1-4C)alkyl [optionally substituted by 1 or 2 R⁸ groups]; or an NR²R³ group forms a morpholine, thiomorpholine (and oxidised versions thereof), pyrrolidine, or piperidine ring and wherein the ring is optionally substituted by 1 or 2 substituents independently selected from chloro, fluoro, hydroxy and methoxy;

- R⁸ is independently selected from hydrogen, hydroxy, -C(O)N(R⁹)(R¹⁰), -NHC(O)R⁹,
- -COOR⁹, aryl, heterocyclyl, and 5- and 6-membered cyclic acetals and mono- and di-methyl derivatives thereof:
- R⁹ and R¹⁰ are independently selected from hydrogen, hydroxy and (1-4C)alkyl; or R⁹ and R¹⁰ together with the nitrogen to which they are attached form a morpholine ring.
- 20 (new) A compound of the formula (I) or a pharmaceutically acceptable salt or pro-drug thereof, selected from:
- Methyl (1R,2R)-2-{[(2,3-dichloro-4*H*-thieno[3,2-*b*]pyrrol-5-yl)carbonyl]amino}indane-1-carboxylate;
- (1R,2R)-2-{[(2,3-Dichloro-4*H*-thieno[3,2-*b*]pyrrol-5-yl)carbonyl]amino}indane-1-carboxylic acid;
- N-[(1R,2R)-1-(Aminocarbonyl)-2,3-dihydro-1H-inden-2-yl]-2,3-dichloro-4H-thieno[3,2-b]pyrrole-5-carboxamide;
- 2,3-Dichloro-*N*-[(1*R*,2*R*)-1-(hydroxymethyl)-2,3-dihydro-1*H*-inden-2-yl]-4*H*-thieno[3,2-*b*]pyrrole-5-carboxamide;
- 2-Chloro-*N*-[(1*R*,2*R*)-1-(hydroxymethyl)-2,3-dihydro-1*H*-inden-2-yl]-6*H*-thieno[2,3-*b*]pyrrole-5-carboxamide;
- 2,3-Dichloro-N-((1R,2R)-1-{[(3R,4S)-3,4-dihydroxypyrrolidin-1-yl]carbonyl}-2,3-dihydro-1H-inden-2-yl)-4H-thieno[3,2-B]pyrrole-5-carboxamide;
- 2,3-Dichloro-N-((1R,2R)-1-{[(2,3-dihydroxypropyl)amino]carbonyl}-2,3-dihydro-1H-inden-2-yl)-4H-thieno[3,2-b]pyrrole-5-carboxamide;
- 2,3-Dichloro-N-((1R,2R)-1-{[(2-hydroxyethyl)amino]carbonyl}-2,3-dihydro-1H-inden-2-yl)-4H-thieno[3,2-b]pyrrole-5-carboxamide;
- 2,3-Dichloro-N-((1R,2R)-1-{[(glycinamide]carbonyl}-2,3-dihydro-1H-inden-2-yl)-4H-thieno[3,2-b]pyrrole-5-carboxamide;
- $((1R,2R)-2-\{[(2,3-\text{Dichloro}-4H-\text{thieno}[3,2-b]\text{pyrrol}-5-yl)\text{carbonyl}]$ amino $\}-2,3-\text{dihydro}-1H-\text{inden-1-yl}$ methyl methanesulfonate;
- *N*-{(1*S*,2*R*)-1-[(Acetylamino)methyl]-2,3-dihydro-1*H*-inden-2-yl}-2,3-dichloro-4*H*-thieno[3,2-*b*]pyrrole-5-carboxamide;
- 2,3-Dichloro-*N*-{(1*S*,2*R*)-1-[(formylamino)methyl]-2,3-dihydro-1*H*-inden-2-yl}-4*H*-thieno[3,2-*b*]pyrrole-5-carboxamide;
- 2,3-Dichloro-N-{(1S,2R)-1-[(glycoloylamino)methyl]-2,3-dihydro-1H-inden-2-yl}-4H-thieno[3,2-b]pyrrole-5-carboxamide;
- 2,3-Dichloro-N-((1S,2R)-1-{[(methylthio)amino]methyl}-2,3-dihydro-1H-inden-2-yl)-4H-thieno[3,2-b]pyrrole-5-carboxamide;

- 2-Chloro-*N*-{(1*R*,2*R*)-1-[(methylsulfinyl)methyl]-2,3-dihydro-1*H*-inden-2-yl}-6*H*-thieno[2,3-b]pyrrole-5-carboxamide;
- 2-Chloro-N-{(1R,2R)-1-[(methylsulfonyl)methyl]-2,3-dihydro-1H-inden-2-yl}-6H-thieno[2,3-b]pyrrole-5-carboxamide;
- 2-Chloro-N-[(1S,2R)-1-(thiomorpholin-4-ylmethyl)-2,3-dihydro-1H-inden-2-yl]-6H-thieno[2,3-b]pyrrole-5-carboxamide;
- 2-Chloro-N-{(1S,2R)-1-[(1-oxidothiomorpholin-4-yl)methyl]-2,3-dihydro-1H-inden-2-yl}-6H-thieno[2,3-h]pyrrole-5-carboxamide;
- 2-Chloro-N-{(1S,2R)-1-[(1,1-dioxidothiomorpholin-4-yl)methyl]-2,3-dihydro-1H-inden-2-yl}-6H-thieno[2,3-b]pyrrole-5-carboxamide;
- (+/-)-trans-2-Chloro-*N*-[-1-(methylthio)-2,3-dihydro-1*H*-inden-2-yl]-6*H*-thieno[2,3-*b*]pyrrole-5-carboxamide;
- (+/-)-trans-2,3-Dichloro-N-[-1-(1H-imidazol-2-ylthio)-2,3-dihydro-1H-inden-2-yl]-4H-thieno[3,2-b]pyrrole-5-carboxamide;
- (+/-)-trans -2,3-Dichloro-N- $\{-1$ -[(4-methyl-4H-1,2,4-triazol-3-yl)thio]-2,3-dihydro-1H-inden-2-yl}-4H-thieno[3,2-b]pyrrole-5-carboxamide;
- $[((1R,2R)-2-\{[(2,3-Dichloro-4H-thieno[3,2-b]pyrrol-5-yl)carbonyl]amino}-2,3-dihydro-1H-inden-1-yl)thio]acetic acid;$
- 2,3-Dichloro-N-((1R,2R)-1-{[2-(dimethylamino)-2-oxoethyl]thio}-2,3-dihydro-1H-inden-2-yl)-4H-thieno[3,2-b]pyrrole-5-carboxamide;
- 2,3-Dichloro-N-((1R,2R)-1-{[2-(dimethylamino)-2-oxoethyl]sulfonyl}-2,3-dihydro-1H-inden-2-yl)-4H-thieno[3,2-b]pyrrole-5-carboxamide;
- (+/-)-trans-(-2-{[(2-Chloro-6*H*-thieno[2,3-*b*]pyrrol-5-yl)carbonyl]amino}-2,3-dihydro-1*H*-inden-1-yl)thio]acetic acid;
- (+/-)-trans-2-Chloro-N-((1R,2R)-1- $\{[2-(dimethylamino)-2-oxoethyl]$ thio $\}$ -2,3-dihydro-1H-inden-2-yl)-6H-thieno[2,3-b]pyrrole-5-carboxamide;
- 2,3-Dichloro-N-{(1R,2R)-1-[(2-hydroxyethyl)thio]-2,3-dihydro-1H-inden-2-yl}-4H-thieno[3,2-b]pyrrole-5-carboxamide;
- (+/-)-trans-Methyl (-2-{[(2-chloro-6*H*-thieno[2,3-*b*]pyrrol-5-yl)carbonyl]amino}-2,3-dihydro-1*H*-inden-1-yl)acetate;
- (+/-)-trans-(-2-{[(2-Chloro-6*H*-thieno[2,3-*b*]pyrrol-5-yl)carbonyl]amino}-2,3-dihydro-1*H*-inden-1-yl)acetic acid;
- (+/-)-trans-2-Chloro-N-{-1-[2-(dimethylamino)-2-oxoethyl]-2,3-dihydro-1*H*-inden-2-yl}-6*H*-thieno[2,3-*b*]pyrrole-5-carboxamide;
- (+/-)-trans-2-Chloro-N-[-1-(2-morpholin-4-yl-2-oxoethyl)-2,3-dihydro-1*H*-inden-2-yl]-6*H*-thieno[2,3-*b*]pyrrole-5-carboxamide;

- (+/-)-trans-2-Chloro-N-(-1-{2-[(2-hydroxyethyl)amino]-2-oxoethyl}-2,3-dihydro-1*H*-inden-2-yl)-6*H*-thieno[2,3-*b*]pyrrole-5-carboxamide;
- 2-Chloro-N-((1R,2R)-1-{[(2-hydroxyethyl)thio]methyl}-2,3-dihydro-1H-inden-2-yl)-6H-thieno[2,3-b]pyrrole-5-carboxamide;
- 2-Chloro-N-((1R,2R)-1-{[(3-hydroxypropyl)thio]methyl}-2,3-dihydro-1H-inden-2-yl)-6H-thieno[2,3-B]pyrrole-5-carboxamide;
- 2-Chloro-*N*-((1*R*,2*R*)-1-{[(2,3-dihydroxypropyl)thio]methyl}-2,3-dihydro-1*H*-inden-2-yl)-6*H*-thieno[2,3-*b*]pyrrole-5-carboxamide;
- *N*-[(1*R*,2*R*)-1-({[2-(Acetylamino)ethyl]thio}methyl)-2,3-dihydro-1*H*-inden-2-yl]-2-chloro-6*H*-thieno[2,3-*b*]pyrrole-5-carboxamide;
- Methyl $\{[((1R,2R)-2-\{[(2-chloro-6H-thieno[2,3-b]pyrrol-5-yl)carbonyl]amino}-2,3-dihydro-1H-inden-1-yl)methyl]thio}acetate;$
- 2-Chloro-N-{(1R,2R)-1-[({[(4S)-2,2-dimethyl-1,3-dioxolan-4-yl]methyl}thio)methyl]-2,3-dihydro-1H-inden-2-yl}-6H-thieno[2,3-b]pyrrole-5-carboxamide;
- S-[((1*R*,2*R*)-2-{[(2-Chloro-6*H*-thieno[2,3-*b*]pyrrol-5-yl)carbonyl]amino}-2,3-dihydro-1*H*-inden-1-yl)methyl] ethanethioate;
- 2-Chloro-*N*-((1*R*,2*R*)-1-{[(2-hydroxyethyl)sulfonyl]methyl}-2,3-dihydro-1*H*-inden-2-yl)-6*H*-thieno[2,3-*b*]pyrrole-5-carboxamide;
- 2-Chloro-N-((1R,2R)-1-{[(3-hydroxypropyl)sulfonyl]methyl}-2,3-dihydro-1H-inden-2-yl)-6H-thieno[2,3-D]pyrrole-5-carboxamide;
- 2-Chloro-N-((1R,2R)-1-{[(2,3-dihydroxypropyl)sulfonyl]methyl}-2,3-dihydro-1H-inden-2-yl)-6H-thieno[2,3-b]pyrrole-5-carboxamide;
- $N-[(1R,2R)-1-(\{[2-(Acetylamino)ethyl]sulfonyl\}methyl)-2,3-dihydro-1<math>H$ -inden-2-yl]-2-chloro-6H-thieno[2,3-b]pyrrole-5-carboxamide;
- 2-Chloro-N-{(1R,2R)-1-[({[(4S)-2,2-dimethyl-1,3-dioxolan-4-yl]methyl}sulfinyl)methyl]-2,3-dihydro-1H-inden-2-yl}-6H-thieno[2,3-B]pyrrole-5-carboxamide;
- 2-Chloro-N-{(1R,2R)-1-[({[(4S)-2,2-dimethyl-1,3-dioxolan-4-yl]methyl}sulfonyl)methyl]-2,3-dihydro-1H-inden-2-yl}-6H-thieno[2,3-b]pyrrole-5-carboxamide;
- 2-Chloro-N-[(1R,2R)-1-({[(2S)-2,3-dihydroxypropyl]sulfonyl}methyl)-2,3-dihydro-1H-inden-2-yl]-6H-thieno[2,3-b]pyrrole-5-carboxamide;
- 2-Chloro-N-[(1R,2R)-1-({[(2S)-2,3-dihydroxypropyl]sulfinyl}methyl)-2,3-dihydro-1H-inden-2-yl]-6H-thieno[2,3-B]pyrrole-5-carboxamide;
- 2-Chloro-*N*-[(1*R*,2*R*)-1-[(ethenylsulfonyl)methyl]-2,3-dihydro-1*H*-inden-2-yl]- 6*H*-thieno[2,3-*b*]pyrrole-5-carboxamide;
- 2-Chloro-N-[(1R,2R)-1-({[2-(1H-imidazol-1-yl)ethyl]sulfonyl}methyl)-2,3-dihydro-1H-inden-2-yl]-6H-thieno[2,3-b]pyrrole-5-carboxamide;

- 2-Chloro-*N*-[(1*R*,2*R*)-1-({[(2-hydroxyethyl)amino]sulfonyl}methyl)-2,3-dihydro-1*H*-inden-2-yl]-6*H*-thieno[2,3-*b*]pyrrole-5-carboxamide;
- Methyl N-{[((1R,2R)-2-{[1-(2-chloro-6H-thieno[2,3-b]pyrrol-5-yl)vinyl]amino}-2,3-dihydro-1H-inden-1-yl)methyl]sulfonyl}glycinate;
- $N-\{[((1R,2R)-2-\{[1-(2-Chloro-6H-thieno[2,3-b]pyrrol-5-yl)vinyl]amino\}-2,3-dihydro-1H-inden-1-yl)methyl]sulfonyl}glycine;$
- 2,3-Dichloro-N-[(1R,2R)-1-({[(2-hydroxyethyl)amino]sulfonyl}methyl)-2,3-dihydro-1H-inden-2-yl]-4H-thieno[3,2-b]pyrrole-5-carboxamide;
- 2,3-Dichloro-N-((1R,2R)-1-{[(propylamino)sulfonyl]methyl}-2,3-dihydro-1H-inden-2-yl)-4H-thieno[3,2-b]pyrrole-5-carboxamide;
- 2,3-Dichloro-N-{(1R,2R)-1-[(morpholin-4-ylsulfonyl)methyl]-2,3-dihydro-1H-inden-2-yl}-4H-thieno[3,2-b]pyrrole-5-carboxamide;
- 2,3-Dichloro-N-[(1R,2R)-1-({[(2,3-dihydroxypropyl)amino]sulfonyl}methyl)-2,3-dihydro-1H-inden-2-yl]-4H-thieno[3,2-b]pyrrole-5-carboxamide;
- (2R/S)-[((1R,2R)-2-{[(2,3-Dichloro-4H-thieno[3,2-b]pyrrol-5-yl)carbonyl]amino}-2,3-dihydro-1H-inden-1-yl)thio]propanoic acid; and
- $(2R/S)-[((1R,2R)-2-\{[(2-Chloro-6H-thieno[2,3-b]pyrrol-5-yl)carbonyl]amino}-2,3-dihydro-1H-inden-1-yl)thio]propanoic acid.$
- 21. (new) A method of producing a glycogen phosphorylase inhibitory effect in a warm-blooded animal, such as man, in need of such treatment which comprises administering to said animal an effective amount of a compound of formula (1) as claimed in claim 1.
- 22. (new) A method of treating type 2 diabetes, insulin resistance, syndrome X, hyperinsulinaemia, hyperglucagonaemia, cardiac ischaemia or obesity in a warm-blooded animal, such as man, in need of such treatment which comprises administering to said animal an effective amount of a compound of formula (1) as claimed in claim 1.
- 23. (new) A method of treating type 2 diabetes in a warm-blooded animal, such as man, in need of such treatment which comprises administering to said animal an effective amount of a compound of formula (1) as claimed in claim 1.